SIEMENS

PATENT

Attorney Docket No. 2002P20296WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	W. Krug	)	Group Art Unit:	2836
		)		
Serial No.:	10/542,446	)	Examiner:	Kaplan, Hal Ira
		)		
Filed:	7/14/2005	)	Confirmation No.:	5112

Title: POWER SUPPLY CIRCUIT FOR AN ELECTRIC SYSTEM, ELECTRIC SYSTEM COMPRISING A POWER SUPPLY CIRCUIT AND METHOD FOR OPERATING THE POWER SUPPLY CIRCUIT

Mail Stop Appeal Brief - Patent
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF UNDER 37 CFR 41.37

Sir:

This brief is in furtherance of the Notice of Appeal filed in this application on February 12, 2008.

1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in this Appeal is the assignee of the present application, Siemens Aktiengesellschaft.

2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

There is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims canceled: 1-6, 9, 11-12.
Claims withdrawn but not canceled: None.
Claims pending: 7, 8, 10, 13 - 23.
Claims allowed: none.
Claims rejected: 7, 8, 10, 13 - 23.

The claims on appeal are 7, 8, 10, 13 - 23. A copy of the claims on appeal is attached hereto in the Claims Appendix.

4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

New art rejections were presented for the first time in the final Office Communication mailed 11/13/2007. Appellants requested reconsideration of the new rejections without claim amendment in a paper filed under 37 CFR 1.116 on 01/09/2008. The Examiner responded in an Advisory Action mailed on 01/22/2008 and the rejections were sustained.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

5A. General Summary of Claimed Subject Matter

The invention is applicable to power supply circuits of the type which provide multiple and different supply voltages such as used in communications systems, personal computers and consumer electronics generally. For product safety reasons, voltages applied to ports or

interfaces, such as, for example, the well-known USB (Universal Serial Bus) interface, are subject to safety restrictions wherein certain maximum voltage levels are not to be exceeded. The Safety Extra Low Voltage (SELV) Standard, as set forth in the IEC 60950 standard of the International Electrotechnical Commission, is exemplary and is used in the specification with reference to an exemplary maximum permissible voltage requirement of 60V, wherein direct voltages exceeding this level are classified as hazardous and dangerous. The problem is of particular concern among circuits of the type which provide multiple, different supply voltages when a fault occurs such that voltages of two different modules may become additive at an external interface. This situation can cause the voltage level at the external interface to exceed the maximum permissible value.

According to the prior art, individual circuits or modules operating with different input or output voltages have been isolated with respect to one another, but this has added considerable complexity, particularly when operating voltages associated with one module are routed along circuitry of another module. The claimed invention (see independent claims 7, 15 and 22) reduces potential circuit complexities when a plurality of power supply components are configured for powering different modules in the same system, e.g., a personal computer. Generally, appellants draw upon a feature of such systems wherein, given multiple modules or interfaces operating at differing voltage levels, a system-wide maximum voltage differential occurs across terminals of one of the modules or interfaces. Therefore, in one embodiment of the invention, a regulating circuit may be configured to adjust deviations, i.e., to counter voltage swings, which would otherwise cause voltage across terminals in the system to exceed the maximum permitted voltage differential. In some embodiments voltage levels across other module terminals in the system are within the range of the regulated maximum voltage differential. Thus, by regulating the one maximum voltage differential among all of the modules or interfaces in a system, it becomes possible to assure that no greater voltage differentials will occur among terminals in the system, even in the event of a short circuit. Embodiments of the claimed invention may include combinations of the foregoing features and the prior art. For example, it is possible to nonetheless still fully isolate a high voltage ringing signal in a conventional subscriber line interface circuit while, at the same time, applying a regulator circuit. See, also, page 4, paragraph [0011] of the patent application. Thus, as more fully described in the following summaries of subject matter presented in each claim, a regulating circuit can control a

voltage differential so as to not exceed a maximum value, thereby facilitating compliance with specifications or applicable safety standards.

5B. Summary of Subject Matter Defined In Independent Claim 7

With reference to the embodiment as described in the sole figure and the specification at pages 5 – 8, the invention of **claim 7** relates generally to an improved class of communication systems including the illustrated system KA, which may be a PBX. The system KA includes a plurality of communications circuit modules (*SVB, ATB, SYSB*) each operable at one or more of a plurality of voltages. *First, see page 5, lines 20-26, 28-33, and page 6, lines 1 – 8 which describe module SVB and component SB1 having a -24 V output voltage, and describing DC to DC converters SB2 and SB3. With regard to modules ATB and SYSB see page 8, lines 8-30.* At least one of the modules (*SVB, ATB and/or SYSB*) is compliant with a maximum permissible voltage level (*e.g., 36v + 24v = 60v*) defined for normal operation of the module. *Noting that module SVB includes the converter SB2, see, again, page 6, lines 10-25 as well as page 6, line 31 through page 7, line 10.* A plurality of power supply components (*SB1, SB2 and SB3*) can simultaneously supply the circuit modules (*SVB, ATB and/or SYSB*) with multiple voltage levels. *See, again, page 5, lines 20-26, 28-33, and page 6, lines 1 – 8 which describe exemplary component SB1 and exemplary DC to DC converters SB2 and SB3.* A regulating circuit R is connected to control output of at least a first of the power supply components, *e.g., DC to DC converter SB2,* with respect to the maximum permissible voltage level during operation of the communication system. *See page 6, lines 10-25 and page 7, line 12 to page 8, line 6.* The regulating circuit (*R*) is configured to control voltage output from the first power supply component (*SB2*) so that deviation exceeding the maximum permissible voltage level (*e.g., 60V*) is reduced or prevented.

5C. Summary of Subject Matter Defined In Independent Claim 15

Again with reference to the embodiment described in the sole figure and the specification at pages 5 – 8, the invention of **claim 15** relates generally to an improved class of communication systems including the illustrated system KA. A plurality of communications

circuit modules (*SVB, ATB, SYSB*) are each operable at one or more of a plurality of voltages. *Again, see page 5, lines 20-26, 28-33, and page 6, lines 1 – 8 which describe module SVB, component SB1) having a -24 V output voltage, and DC to DC converters SB2 and SB3. With regard to modules ATB and SYSB see page 8, lines 8-30.* At least one of the modules (*SVB*) is compliant with a maximum permissible voltage differential according to the Safety Extra Low Voltage (SELV) standard as defined in the IEC 60950 standard of the International Electrotechnical Commission. See page 7, lines 7-10. A power supply circuit (*NG, SB1, SB2, SB3, ATS, SELV*) includes a plurality of power supply components (*SB1, SB2, SB3*) for supplying the modules (*SVB, ATB, SYSB*) with a plurality of voltage levels, and having a regulating circuit (*R*) for regulating voltage output from a first of the power supply components (*SB2*) relative to the SELV standard. *See page 3, lines 11-25; page 5, lines 17-27; page 5, line 28 – page 6, line 25.* The regulating circuit (*R*) is connected between outputs of power supply components (*e.g., SB1, SB2*) between which the maximum voltage differential occurs during normal operation of the system. The regulating circuit (*R*) is adapted so that in case of deviation beyond the maximum permissible voltage differential (*e.g., 60V*) from a reference voltage value (*e.g., -24V*) output from the first power supply component (*SB1*) will be adjusted to reduce the deviation. *See page 6, line 27- page 7, line 10. Note reference to "dashed arrow" in the figure.*

5D. Summary of Subject Matter Defined In Independent Claim 22

Once more referencing the embodiment described in the sole figure and the specification at pages 5 – 8, the invention of **claim 22** relates generally to a method for operating a power supply circuit in a communication system (*KA*). The power supply circuit (*NG, SB1, SB2, SB3, ATS, SELV*) includes a plurality of power supply components (*SB1, SB2, SB3*) for simultaneously supplying modules (*SVB, ATB, SYSB*) of the communication system KA with multiple voltage levels (*e.g., -24V, +1.8V, +3.3V,, +5V, +36V*). *See page 3, lines 11-25; page 5, lines 17-27; page 5, line 28 – page 6, line 25.* A regulating circuit (*R*), for regulating a first of the power supply components (*e.g., SB1*), is connected to outputs of at least the first power supply component (*e.g., SB2*) and one of the other power supply components (*SB1*) between which a maximum voltage differential occurs during normal operation of the communication system (*see page 5, line 28 – page 6, line 25*). The regulating circuit is adapted to reduce or eliminate

deviation of the maximum voltage differential beyond a reference voltage value. *See page 6, line 27 – page 7, line 7.* The method of claim 22 includes comparing the maximum voltage differential (*e.g., the output voltage of the power supply component SB2; see page 6, lines 18 – 21; see, also, page 6, line 31 – page 7, line 10*) with the reference voltage value (*e.g., 60V*); and adjusting voltage output from one of the power supply components (*SB2*) when the maximum voltage differential exceeds the reference voltage value such that the deviation will be reduced. *See page 7, line 29 – page 8, line 6.*

6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL - 37 CFR 41.37(c)(1)(vi)

1. Whether claims 7, 10, 13, 14, 22 and 23 are unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 3,740,569 (Carcia) in view of U.S. Patent No. 5,555,151 (Baker).

2. Whether claim 8 is unpatentable under 35 U.S.C. 103(a) over Carcia in view of Baker as applied to claim 7 and further in view of U.S. Patent No. 7,085,584 (Shima).

3. Whether claims 15, 16, 18 and 21 are unpatentable under 35 U.S.C. 103(a) over Carcia in view of Baker, and further in view of U.S. Patent 6,757,386 (Latu).

4. Whether claims 17 and 20 are unpatentable under 35 U.S.C. 103(a) over Carcia in view of Baker and Latu as applied to claim 15, and further in view of U.S. Patent 6,263,015 (Awata).

5. Whether claim 19 is unpatentable under 35 U.S.C. 103(a) over Carcia in view of Baker as applied to claim 16, and further in view of U.S. Patent 7,085,584 (Shima).

(Please proceed to the next page.)

7. ARGUMENT 37 CFR 41.37(c)(1)(vii)

7A. *(First grounds of rejection)* APPELLANTS TRAVERSE ALL REJECTIONS BASED ON CARCIA IN VIEW OF BAKER

7A(1). THE REJECTION OF INDEPENDENT CLAIM 7 AND EACH OF THE CLAIMS 10 AND 13-14 WHICH DEPEND THEREFROM UNDER 35 U.S.C. 103(a), AS UNPATENTABLE OVER CARCIA IN VIEW OF BAKER, IS IMPROPER.

The Appellant traverses all of the rejections applied to claims 7, 10, 13 and 14 under 35 USC 103 because the combination of Carcia in view of Baker, used to reject independent claim 7, fails to disclose each feature recited in claim 7. Claim 7 is directed to a communication system, requiring

> "a plurality of communications circuit modules ...
> a plurality of power supply components for ... supplying ... multiple voltage levels; and
> a regulating circuit connected to control output of at least a first of the power supply components ... so that deviation exceeding the maximum permissible voltage level is reduced or prevented."

The rejection proposes that a portable radio telephone (Col. 1, lines 9-26 of Carcia) includes power supply terminals 11 – 14 which read on appellant's claimed circuit modules. However, terminal 11 appears to be a terminal supplying voltage from a battery 18; and the terminals 12, 13 and 14 are no more than terminals of the very same voltage regulators 26, 27 and 28 which the Examiner uses to read the next claimed "power supply components" upon. It is incorrect to read appellants modules on the terminals of the same component which the Examiner uses to read the power supply components on. This error is analogous to double inclusion.

Further, it is error to read the claimed "circuit modules" upon mere terminals. A terminal is nothing more that – i.e., a terminal, and a terminal is neither a circuit nor a module. By way of contrast, appellant's example embodiment shown in the figure discloses a power supply module SVB, a subscriber interface ATB and a system module SYSB.

As noted, the rejection reads the claimed "power supply components" on the voltage regulators 26, 27 and 28, and then concludes that while Carcia does not disclose the claimed "regulating circuit" such can be extracted from Baker who supposedly applies appellant's

regulating circuit "to control output of power supply components (110, 112, 114, 118, 120, 122) with respect to a maximum permissible voltage level ... so that deviation ... exceeding the maximum permissible voltage level is reduced or prevented ..."\

First, it is noted that Baker does not at all relate to the claimed subject matter. Instead, the reference concerns electric power generation and distribution systems (Col. 1, lines 14 – 15) and situations wherein

"a short break in power delivered to the loads results from the transfer from one source to another as illustrated in FIG. 2." This break is a result of opening the present source's contactor prior to closing the target source's contactor to complete the transfer. "

Second, it is clear from the Baker disclosure that the disclosed components do not relate to regulation. Rather, the subject components are used to generate a signal which is *compared* to "a predetermined threshold voltage" [col. 5, line15] and a comparator output is "generated when the input ... exceeds the threshold 156, indicating that not all of the phases of the two sources are in synchronism." See col. 5, lines 16-23. As stated at lines 19-23, the threshold corresponds to the maximum acceptable difference in phase displacement, frequency and magnitude between the two sources. That is, the two sources, as stated at col. 4, lines 49-60 are waveforms, and Baker rectifies these in order to perform the comparator function in relation to differences in phase displacement, frequency and magnitude between the two waveforms. Further, as stated at col. 4, lines 63-67, the comparison means 134 "generates a power transfer inhibit signal ... when the error signal exceeds the threshold." This is not the same as what is required by claim 7, i.e., providing a

> "regulating circuit configured to control voltage output from the first power supply component so that deviation exceeding the maximum permissible voltage level is reduced or prevented."

The generation of an "inhibit signal" in Baker might possibly be construed as a form of regulation, but this is not the same as controlling a voltage output so that "deviation exceeding the maximum permissible voltage level is reduced or prevented." Thus there is simply no basis to argue that the claimed "regulating circuit" is disclosed by Baker. Nor is there any basis for combining these references as no one attempting to regulate a maximum voltage output by a power supply would do so by extracting circuitry to perform a comparator function in relation to differences in phase displacement, frequency and magnitude between two waveforms. Such

circuitry, which, as stated at col. 4, lines 63-67, "generates a power transfer inhibit signal ... when the error signal exceeds the threshold ..." has no apparent relation to a circuit configured to control voltage output so that a voltage level deviation is reduced or prevented." The Baker reference does not disclose a regulating circuit to "control voltage output" and thereby reduce or prevent a deviation from exceeding a maximum permissible voltage level.

Thus it is not possible to combine the disclosure of Baker with that of Carcia to meet the terms of claim 7. Further, the sense circuit of Baker, being designed for transfer of poly-phase electric power to a target source (col. 3, lines 22-40) rectifies the AC waveforms of both a present source and a target source in order to determine whether differences in the two waveforms exceed predetermined values. This is not the same as or consistent with reducing or preventing a deviation from exceeding a maximum voltage level.

The rejection has confused or wrongfully interchanged Baker's threshold level, associated with a comparator function, with applicants' prevention of deviations beyond a predetermined value. Further, the circuitry of Baker could not perform the claimed function for the terminals of the Carcia reference because the voltages considered in the Baker reference are not DC voltages as required by the terminals of Carcia.

In summary, the Examiner has disagreed with or ignored all of the above errors. The Baker reference has been applied against the claims while it relates to a power supply circuit which addresses an entirely different problem from that subject matter to which the claims are expressly directed. In the Advisory Action mailed 1/22/2008, in reply to the Appellant's request for reconsideration, the Examiner responded by stating:

"The Examiner disagrees, as inhibiting power transfer is a form of ... control (on-off control), and if power transfer from the first power supply component were inhibited, the output voltage of the first power supply component would not exceed its maximum permissible voltage level."

The above reasoning ignores the reality of what the references disclose, resulting in a hindsight attempt to recreate the invention via a piece meal reconstruction. Furthermore, the Examiner's technical justification for enabling a recombination of the references is without merit. The Examiner states in the Advisory Action:

"Although the input voltages of the Baker reference are not DC voltages, the rectified voltages are DC voltages, and thus the DC voltages of Carcia could be regulated in an analogous

manner ... the maximum permissible voltage level of the first power supply component of Carcia would be used as the threshold voltage of Baker."

At best, the above reasoning only confirms how a failed piecemeal reconstruction might be undertaken by the Examiner. A speculative hodge podge of rectified signals and useless analogies does nothing to create what is claimed.

In fact (as explained in the Response to the Final Office Action), it is inconsistent to combine the disclosure of Baker with that of Carcia. This is because the sense circuit of Baker, being designed for transfer of poly-phase electric power to a target source (col. 3, lines 22-40), rectifies the AC waveforms of both a present source and a target source in order to determine whether differences in the two waveforms exceed predetermined values. This is not the same as reducing or preventing a deviation from exceeding a maximum voltage level. In fact, the Baker reference does not disclose a regulating circuit to "control voltage output" and thereby reduce or prevent a deviation from exceeding a maximum permissible voltage level. So, "finding" a rectified signal in Baker does nothing to help re-create the invention. The Examiner also overlooks the fact that the DC signals shown in Figures 7 and 8 of Baker are input to a comparator and are not power supply output voltages. See Col. 5, lines 32-60.

The rejection continues to confuse and interchange Baker's threshold level, associated with a comparator function, with appellant's prevention of deviations in output voltage beyond a predetermined value. Further, the circuitry of Baker could not perform the claimed function for the terminals of the Carcia reference because the combination is not consistent with provision of DC voltages at the terminals 11-14 of Carcia.

As noted at col. 3, lines 13-22, cited by the Examiner, in the context of no-break power transfer, the Baker reference deals with situations in which "any phase of a target source of electric power differs from the associated phase of the present source in magnitude, phase relationship, or frequency ..." Neither the Carcia reference nor the applicant is at all concerned with such disparity or a removal of such disparity between a present source and a target source. It is only in that context that the Baker reference discloses generation of "a synchronization error signal in response to any ... differing in magnitude, phase relationship, or frequency ..."

For all of these reasons, the rejections of independent claim 7 and each of the claims 8, 10 and 13-14 which depend therefrom are improper.

7A(2). THE REJECTION OF INDEPENDENT CLAIM 22 AND CLAIM 23 WHICH DEPENDS THEREFROM, UNDER 35 U.S.C. 103(a) AS UNPATENTABLE OVER CARCIA IN VIEW OF BAKER AND AWATA, IS IMPROPER.

The method of claim 22 for operating a power supply circuit in a communication system, requires

> "comparing the maximum voltage differential with the reference voltage value and adjusting voltage output from one of the power supply components when the maximum voltage differential exceeds the reference voltage value such that the deviation will be reduced."

A proper basis for rejection of claim 22 is lacking, as the rejection appears to ignore language of the "comparing" step, i.e., Baker does not compare a maximum voltage differential "with the reference voltage value."

The rejection also overlooks the literal meaning of the method step "adjusting voltage output from one of the power supply components when the maximum voltage differential exceeds the reference voltage value such that the deviation will be reduced." None of the Baker reference discloses this feature and the final rejection does not propose otherwise. If the Examiner believes that this subject matter is disclosed the Examiner must provided citations in support of such. However, the rejection must fall because this is not disclosed in the Baker reference.

In summary, among the rejections of the three independent claims, the final rejection of claim 22 most blatantly fails to properly read the claim language on the cited combination of method steps. Therefore, the rejections of independent claim 22 and claim 23 which depends therefrom are improper. Allowance of these claims is therefore requested.

7B. *(Second grounds of rejection)* THE REJECTION OF CLAIM 8 UNDER 35 U.S.C. 103(A) AS UNPATENTABLE OVER CARCIA IN VIEW OF BAKER AND SHIMA IS IMPROPER. CLAIM 8 IS PATENTABLY DISTINCT OVER THIS COMBINATION.

Claim 8 was rejected on the basis of rejecting claim 7 with the added argument that Shima discloses a USB interface. The rejection mirrors the hodge podge piecemeal approach taken in rejecting all of the claims. If the mere agglomeration of components were the test for obviousness, nothing would be patentable. In fact, by the very citation of Shima for showing a

USB interface, the Examiner has created further inconsistency in the rejections. That is, the rejection of claim 7 reads the claimed modules on "terminals" and now the Examiner chooses to add an entirely different reading on the terminals of Carcia by "making them" into USB interfaces. The Examiner cannot have it both ways. None of the prior art teaches or suggests the claimed combination and efforts to reject the claims have required strained and inconsistent application of the prior art. Allowance of claim 8 is requested.

7C. *(Third grounds of rejection)* THE REJECTION OF INDEPENDENT CLAIM 15 AND EACH OF THE CLAIMS 16, 18 AND 21 WHICH DEPEND THEREFROM UNDER 35 U.S.C. 103(a), AS UNPATENTABLE OVER CARCIA IN VIEW OF BAKER AND LATU, IS IMPROPER.

The Appellant traverses all of the rejections applied to claims 15 – 21 under 35 USC 103 because the combination of Carcia in view of Baker and further in view of Latu , used to reject independent claim 15, fails to disclose each feature recited in claim 15. Claim 15 is directed to a communication system, requiring

"a plurality of communications circuit modules each operable at one or more of a plurality of voltages, at least one of the modules being compliant with a maximum permissible voltage differential according to the Safety Extra Low Voltage (SELV) standard as defined in the IEC 60950 standard of the International Electrotechnical Commission; and

a power supply circuit ... for supplying the modules with a plurality of voltage levels, and having a regulating circuit for regulating voltage output from a first of the power supply components relative to the SELV standard, wherein

the regulating circuit is connected between outputs of power supply components between which the maximum voltage differential occurs during normal operation of the system, and wherein

the regulating circuit is adapted so that in case of deviation beyond the maximum permissible voltage differential, from a reference voltage value output from the first power supply component will be adjusted to reduce the deviation."

The rejection incorporates the Examiner's arguments with regard to claim 7 and the deficiencies therein are equally applicable to claim 15. Appellant's argument regarding claim 7 is therefore incorporated in the entirety to traverse the rejection of claim 15. Further, claim 15 requires that:

> the regulating circuit is adapted so that in case of deviation beyond the maximum permissible voltage differential ... the first power supply component will be adjusted to reduce the deviation.

This express claim language helps to further distinguish the invention of claim 15, relative to claim 7, over the prior art combination. That is, claim 15 requires that the regulating circuit adjusts the power supply component to reduce the deviation. The rejection has glossed over this claim requirement. The prior art combination does not reduce a deviation. Also, as noted above with regard to the rejection of claim 7, the disclosure of Baker does not utilize a regulating circuit to perform this function.

The mere addition of the Latu reference (for disclosing the existence of a SELV standard) does not help support the rejection. Appellant has already acknowledged that the SELV standard has been deployed in the prior art. The claimed combination does more. Claim 15 references reducing deviations which are "beyond the maximum permissible voltage differential." This is not the same as anything disclosed in the combination. Further, the Latu reference does not at all compensate for any deficiencies in the combination of Carcia and Baker.

For all of these reasons, the rejections of independent claim 15 and each of the claims 16 – 21 which depend therefrom are improper.

7D. THE COMBINATIONS OF CARCIA IN VIEW OF BAKER AND LATU OR AWATA OR SHIMA USED TO REJECT THE INDEPENDENT CLAIMS 7, 15 AND 22 AND DEPENDENT CLAIMS 8, 17, 19 AND 20 UNDER SECTION 103(a) ARE IMPROPER BECAUSE THEY OVERLOOK DEFICIENCIES AND INCONSISTENCIES.

In summary, the rejections of the independent claims appear to be based on a piecemeal search for elements which only the appellant has combined. The tenet, that discrete and unrelated pieces extracted from two disparate references should be combined to "show" obviousness, is no more appropriate than placing a square peg in a round hole. In fact, there is no basis among any combination of prior art to allege that the teachings of the appellant might be obvious.

7E. *(Fourth grounds of rejection)* APPELLANTS TRAVERSE THE REJECTION OF CLAIMS 17 AND 20 BASED ON CARCIA IN VIEW OF BAKER AND LATU AND IN FURTHER VIEW OF AWATA.

7E(1). THE REJECTION OF CLAIM 17 UNDER 35 U.S.C. 103(A) AS UNPATENTABLE OVER THE COMBINATION OF CARCIA AND BAKER AND LATU AND AWATA IS IMPROPER. CLAIM 17 IS PATENTABLY DISTINCT OVER THIS COMBINATION.

In the system of claim 17, which depends from claim 16, one of the interfaces is an analog subscriber line. This combination is not taught or suggested and is patentably distinct subject matter. Mere identification of a subscriber line interface circuit in the prior art does not render the invention obvious. Only appellant teaches the claimed combination.

7E(2). THE REJECTION OF CLAIM 20 UNDER 35 U.S.C. 103(A) AS UNPATENTABLE OVER THE COMBINATION OF CARCIA AND BAKER AND LATU AND AWATA IS IMPROPER. CLAIM 20 IS PATENTABLY DISTINCT OVER THIS COMBINATION.

In the system of claim 20, which depends from claim 16, one of the modules is an analog subscriber module. This combination is not taught or suggested and is patentably distinct subject matter. Mere identification of a subscriber line module in the prior art does not render the invention obvious. Only appellant teaches the claimed combination.

7F. PATENTABILITY OF EACH CLAIM SHOULD BE SEPARATELY CONSIDERED.

All claims have been rejected based on combinations which include Carcia and Baker. The foregoing argument, based on clear deficiencies in the rejection of claims 7, 15 and 22 demonstrates patentability of all claims. However, none of the rejected claims stand or fall together. This is because each dependent claim defines a unique combination that patentably distinguishes over the art of record.

Patentability of each dependent claim is separately argued and should therefore be separately considered. Argument demonstrating patentability of each dependent claim is presented under subheadings identifying each claim by number. The Board is requested to

consider each argument presented with regard to each dependent claim because each of the claims further distinguishes over the prior art.

7G. EACH OF THE OTHER DEPENDENT CLAIMS IS PATENTABLE AND FURTHER DISTINGUISHES THE INVENTION OVER THE PRIOR ART.

Each of the claims depending from Claims 7, 15 and 22 further distinguishes over the prior art. No combination of any art of record can render any of the dependent claims obvious.

7G(1). Claim 10 is Patentably Distinct over the Combination of Carcia and Baker.

The apparatus of claim 10 distinguishes over the prior art combination because the "maximum permissible voltage differential is a specified voltage value." None of the prior art suggests this subject matter. In fact, the misapplication of the Carcia reference to claims 7 and 8 results in no maximum permissible voltage value (differential) beyond the normal operating output voltages of the regulators 26, 27 and 29. That is, the prior art combination does not recognize or provide for correction to any "deviation exceeding the maximum permissible voltage level" required in claims 7 and 10. Allowance of claim 10 is requested.

7G(2). Claim 13 is Patentably Distinct over the Combination of Carcia and Baker.

The apparatus of claim 13 distinguishes because "the first power supply component provides a power supply output having a maximum output voltage among all of the power supply components." None of this subject matter is suggested by the prior art. It is only the appellant who suggests using a first component in accord with the terms of claim 13. Allowance is requested.

7G(3). Claim 14 is Patentably Distinct over the Combination of Carcia and Baker.

The apparatus of claim 14 is non-obvious at least because it requires that the regulating circuit "regulates at least one further of the power supply components ..." The rejection has not

at all addressed the lack of this subject matter in the prior art. None of the references suggest a regulating circuit that performs the stated function for two or more power supply components. The rejection must be reversed.

7G(4). Claim 16 is Patentably Distinct over the Combination of Carcia and Baker and Latu.

According to claim 16, the circuit modules include communications interfaces. The rejection of claim 15 (which is as set forth in the rejection of claim 7) reads the claimed modules on terminals. Accordingly it is inconsistent to read a claim which depends therefrom on a communication interface found in a different reference. The rejection must be reversed because this combination is absent from the prior art.

7G(5). Claim 18 is Patentably Distinct over the Combination of Carcia and Baker and Latu.

In the system claim 18, which depends from claim 16, the power supply circuit includes a plurality of DC to DC converters. As previously noted, the Baker reference is not directed to such subject matter and the Examiner's combination cannot meet the requirements of this claim. Allowance is requested.

7G(6). *(Fifth grounds of rejection)* The rejection of claim 19 under 35 U.S.C. 103(a) as unpatentable over Carcia in view of Baker and Latu and Awata, is improper. Claim 19 is patentably distinct over this combination.

In the system claim 19, which depends from claim 16, "one of the modules provides a USB interface and the SELV standard compliant module receives multiple voltage levels from the power supply module." This combination cannot result from the prior art combination, as the terminals which are read upon the modules cannot be transformed into USB circuitry for a dependent claim. Rather, there is no teaching or suggestion for the claimed combination.

7G(7). Claim 21 is Patentably Distinct over the Combination of Carcia and Baker and Latu.

The argument for rejecting claim 21 is that one of the modules of Baker is a system module, but this is inconsistent with the Examiner's reading of appellant's modules on "terminals." This rejection must also be reversed.

7G(8). Claim 23 is Patentably Distinct over the Combination of Carcia and Baker.

In the method of claim 23, which depends from claim 22, the "regulating circuit regulates at least two of the power supply components. This arrangement is not at all shown or suggested by the prior art.

Also, in case the deviation of the maximum voltage differential is beyond the reference voltage value the regulating circuit is adapted such that "the further power supply component will be adjusted ..." This subject matter is not at all apparent from the prior art. Allowance of claim 22 is requested.

7H. CONCLUSIONS

Argument has been presented to demonstrate that the rejections under Sections 103 are deficient and that the dependent claims further distinguish over the prior art. The Examiner has argued rejections under Section 103 when claimed features are either absent from the references, or when the features cannot be consistently combined, or when the purported combination does not result in the claimed features. Specifically, language defining elements of the claims has, at times, been ignored in order to piece elements of the prior art together. Accordingly, there can be no rejection under Section 103 and any efforts to reject the claims under Section 103 would amount to no more than a hindsight reconstruction of the prior art. In fact, the rejections under Section 103 require combinations of features in different references that are inconsistent with the Carcia and Baker references. Further, the requisite teachings for the claimed invention are absent from the prior art. For all of these reasons all of the rejections should be withdrawn and the claims should be allowed.

8. CLAIMS APPENDIX - 37 CFR 41.37(c) (1) (viii).

A copy of the claims involved in this appeal is attached as a claims appendix under 37 CFR 41.37(c) (1) (viii).

9. EVIDENCE APPENDIX - 37 CFR 41.37(c) (1) (ix)

None is required under 37 CFR 41.37(c) (1) (ix).

10. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c) (1) (x)

None is required under 37 CFR 41.37(c) (1) (x).

Respectfully submitted,

Dated: 4/14/08

By: _____

John P. Musone
Registration No. 44,961
(407) 736-6449

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, New Jersey 08830

9. APPENDIX OF CLAIMS ON APPEAL - 37 CFR 41.37(c) (1) (ix)

CLAIMS

7. A communication system, comprising:

a plurality of communications circuit modules each operable at one or more of a plurality of voltages, at least one of the modules being compliant with a maximum permissible voltage level defined for normal operation of the module;

a plurality of power supply components for simultaneously supplying the circuit modules with multiple voltage levels; and

a regulating circuit connected to control output of at least a first of the power supply components with respect to the maximum permissible voltage level during operation of the communication system, the regulating circuit configured to control voltage output from the first power supply component so that deviation exceeding the maximum permissible voltage level is reduced or prevented.

8. The system according to claim 7, wherein the modules include one or more interfaces taken from the group consisting of USB, V.24 and Ethernet interfaces.

10. The system according to claim 7, wherein the maximum permissible voltage differential is a specified maximum voltage value.

13. The power supply circuit according to claim 7, wherein the first power supply component provides a power supply output having a maximum output voltage among all of the power supply components.

14. The power supply circuit according to claim 7, wherein the regulating circuit regulates at least one further of the power supply components and the regulating circuit is adapted that in case of deviation beyond the maximum permissible voltage differential output of the one further power supply component will be adjusted.

15. A communication system, comprising:

a plurality of communications circuit modules each operable at one or more of a plurality of voltages, at least one of the modules being compliant with a maximum permissible voltage differential according to the Safety Extra Low Voltage (SELV) standard as defined in the IEC 60950 standard of the International Electrotechnical Commission; and

a power supply circuit having a plurality of power supply components for supplying the modules with a plurality of voltage levels, and having a regulating circuit for regulating voltage output from a first of the power supply components relative to the SELV standard, wherein

the regulating circuit is connected between outputs of power supply components between which the maximum voltage differential occurs during normal operation of the system, and wherein

the regulating circuit is adapted so that in case of deviation beyond the maximum permissible voltage differential, from a reference voltage value output from the first power supply component will be adjusted to reduce the deviation.

16. The system according to claim 15, wherein the circuit modules include communications interfaces.

17. The system according to claim 16, wherein one of the interfaces is an analog subscriber line.

18. The system according to claim 16, wherein the power supply circuit includes a plurality of dc to dc converters.

19. The system according to claim 16, wherein one of the modules provides a USB interface and the SELV standard compliant module receives multiple voltage levels from the power supply module.

20. The system according to claim 16, wherein one of the modules is a subscriber module.

21. The system according to claim 16, wherein one of the modules is a system module.

22. A method for operating a power supply circuit in a communication system, wherein the power supply circuit comprises:

a plurality of power supply components for simultaneously supplying modules of the communication system with multiple voltage levels; and

a regulating circuit for regulating a first of the power supply components, the regulating circuit connected to outputs of at least the first power supply component and one of the other power supply components between which a maximum voltage differential occurs during normal operation of the communication system, the regulating circuit adapted to reduce or eliminate deviation of the maximum voltage differential beyond a reference voltage value, the method comprising:

comparing the maximum voltage differential with the reference voltage value and

adjusting voltage output from one of the power supply components when the maximum voltage differential exceeds the reference voltage value such that the deviation will be reduced.

23. The method according claim 22, wherein the regulating circuit regulates at least two of the power supply components and the regulating circuit is adapted that in case of the deviation of the maximum voltage differential beyond the reference voltage value the further power supply component will be adjusted, the method further comprising adjusting the further power supply component.

10. EVIDENCE APPENDIX - 37 CFR 41.37(c) (1) (ix)

None

11. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c) (1) (x)

None